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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,669

Applicant(s)

BRUECKNER ET AL.

Examiner

NIMA MAHMOUDZADEH

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 08 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 05/08/2008 has been entered. Claims 1- 23 are still pending in this application, with claims 1, 9 and 17 being independent.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12, 4, 5, 8-10, 12, 13, 16, 17, 19, 20, 22, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Pelissier (US Patent No. 6,850,513).

Regarding claim 1, (currently amended): Pelissier teaches a subscriber for a communication system for transmitting and receiving data telegrams (Fig. 2 discloses the data communication between data sources 102, 104 and the destination devices 110. Also for clarification see column 2, lines 57-61), wherein each of the data telegrams has reference data and an identifier (Column 2, lines 65-67, column 4, line 1 and also for further clarification, see column 4, lines 47-57 which discloses the classification and destination information in the packet), wherein a control of transmitting and receiving the data telegrams is based on check data records (Column 3, lines 32-67

which discloses table-based communication that shown in Fig. 1), the subscriber comprising:

a transmission list (Fig. 2, classification table), which includes a first number of the check data records (Column 3, line 53- column 4, line 5. Also see Figs. 3 and 4 that disclose data records), where each of the check data records has an address for the reference data and the identifier (Column 4, lines 29-57 discloses specific classification information, destination and source addresses for the packet. Also, see Figs. 3 and 4 disclose MAC addresses) which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records (Column 4, lines 29-57 discloses specific/unique classification information, destination and source addresses for the packet. Also, MAC address is a unique address);

a circuit unit (Fig. 2, element 206) configured to generate one of the data telegrams to be transmitted, based on one of the first number of check data records in the transmission list (Column 4, lines 6- 57 discloses forwarding from input to out put ports based on the specific classification information and destination address. As shown in Figs. 3 and 4, the MAC address or Data Type is associated to data records. Also, see Fig. 2, elements 206 and 202);

a second number of the check data records (Fig. 1, links 112 and 113. For more clarification, see column 3, line 53- column 4, line 5 that teach different types of data such as real-time or non-real-time data that utilize links 112 and 113. Also, in Fig. 3 and 4 see the relation between Search Key and Next Table Code); and

an assignment unit (Fig. 2, element 202) configured to assign a received data telegram to one of the second number of the check data records, wherein the assignment is based on the identifier of the received data telegram (Column 3, line 32-column 4, line 55 discloses forwarding the packets utilizing table based classification which includes packet classification, source and destination addresses. Also, in Figs. 3 and 4 classification data can be updated when it is received by the node).

Regarding claim 2, (original): Pelissier teaches the subscriber as claimed in claim 1, wherein the communication system comprises at least one of an Ethernet and a real-time Ethernet (Column 3, lines 53-59).

Regarding claim 4, (original): Pelissier teaches the subscriber as claimed in claim 1, wherein the transmission list has at least one control data record, which determines the order of processing the first number of the check data records (Figs. 3 and 4 disclose search key as control data, next table key code and classification for the records).

Regarding claim 5, (original): Pelissier teaches the subscriber as claimed in claim 4, wherein the control data record includes a conditional jump address to a check data record of the first number of the check data records (In Figs. 3 and 4, the next table code is considered a jump address).

Regarding claim 8, (original): Pelissier teaches the subscriber as claimed in claim 1,

wherein check data records of the second number of the check data records are stored in groups (Column 6, lines 25-31 and also, see Fig. 3 elements 306, 308 and 310 are in a group);

wherein access to a check data record is effected by an index (Column 4, lines 16-20 and also, in Figs 3 and 4, next table key code/next table code are indicating if more search is required or not); and

wherein a group of the check data record is determined based on the identifier of the received data telegram (Column 4, lines 16-20, and also, see Figs. 3 and 4).

Regarding claim 9, (currently amended): Pelissier teaches a communication system having a plurality of subscribers for transmitting and receiving data telegrams (Fig. 1, elements 108 and 107),

wherein each of the data telegrams has reference data and an identifier (column 3, line 53- column 4, line 5. Also for further clarification, see column 4, lines 47-57 which discloses the classification and destination information in the packet);

wherein a control of transmitting and receiving the data telegrams by at least one of the subscribers is based on check data records (Column 4, lines 29-57 discloses specific/unique classification information, destination and source addresses for the packet. Also, MAC address is a unique address);

wherein each of the check data records has an address for the reference data and the identifier which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records (Column 4, lines 29-57

discloses specific/unique classification information, destination and source addresses for the packet. Also, see Figs. 3 and 4 where MAC address is a unique address); and

wherein the at least one subscriber comprises:

a transmission list (Fig. 2, classification table), which includes a first number of the check data records (Column 3, line 53- column 4, line 5. Also see Figs. 3 and 4 that disclose data records);

a circuit unit (Fig. 2, element 206) configured to generate one of the data telegrams to be transmitted, based on one of the first number of check data records in the transmission list (Column 4, lines 6- 57 discloses forwarding from input to out put ports based on the specific classification information and destination address. As shown in Figs. 3 and 4, the MAC address or Data Type is associated to data records. Also, see Fig. 2, elements 206 and 202);

a second number of the check data records (Fig. 1, links 112 and 113. For more clarification, see column 3, line 53- column 4, line 5 that teach different types of data such as real-time or non-real-time data that utilize links 112 and 113. Also, in Fig. 3 and 4 see the relation between Search Key and Next Table Code); and

an assignment unit (Fig. 2, element 202) configured to assign a received data telegram to one of the second number of the check data records, wherein the assignment is based on the identifier of the received data telegram (Column 3, line 32- column 4, line 55 discloses forwarding the packets utilizing table based classification which includes packet classification, source and destination addresses. Also, in Figs. 3 and 4 classification data can be updated when it is received by the node).

Regarding claim 10, (original): Pelissier teaches the communication system as claimed in claim 9, wherein the communication system comprises at least one of an Ethernet and real-time Ethernet (Column 3, lines 53-59).

Regarding claim 12, (original): Pelissier teaches the communication system as claimed in claim 9, wherein the transmission list has at least one control data record, which determines the order of processing the first number of the check data records (Figs. 3 and 4 disclose search key as control data, next table key code and classification for the records).

Regarding claim 13, (original): Pelissier teaches the communication system as claimed in claim 12, where the control data record includes a conditional jump address to a check data record of the first number of the check data records (In Figs. 3 and 4, the next table code is considered a jump address).

Regarding claim 16, (original): Pelissier teaches the communication system as claimed in claim 9,

wherein check data records of the second number of the check data records are stored in groups (Column 6, lines 25-31 and also, see Fig. 3 elements 306, 308 and 310 are in a group);

wherein access to a check data record is effected by an index (Column 4, lines 16-20 and also, in Figs 3 and 4, next table key code/next table code are indicating if more search is required or not); and

wherein a group of the check data record is determined based on the identifier of the received data telegram (Column 4, lines 16-20, and also, see Figs. 3 and 4).

Regarding claim 17, (currently amended): Pelissier teaches a method for transmitting and receiving data telegrams by a subscriber of a communication system (Fig. 1, elements 108 and 107), wherein each of the data telegrams has reference data and an identifier, wherein a control of transmitting and receiving the data telegrams by the subscriber is based on check data records (Column 4, lines 29-57 discloses specific/unique classification information, destination and source addresses for the packet. Also, MAC address is a unique address), the method comprising:

generating one of the data telegrams to be transmitted, based on one of a first number of the check data records of a transmission list (Column 4, lines 6- 57 discloses forwarding from input to out put ports based on the specific classification information and destination address. As shown in Figs. 3 and 4, the MAC address or Data Type is associated to data records. Also, see Fig. 2, elements 206 and 202), where each of the check data records has an address for the reference data and the identifier which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records (Column 4, lines 29-57 discloses specific/unique classification information, destination and source addresses for the packet. Also, see Figs. 3 and 4 where MAC address is a unique address); and

assigning a received data (Fig. 2, element 202) telegram to one of a second number of the check data records, wherein the assignment is based on the identifier of the received data telegram (Column 3, line 32- column 4, line 55 discloses forwarding the packets utilizing table based classification which includes packet classification,

source and destination addresses. Also, in Figs. 3 and 4 classification data can be updated when it is received by the node).

Regarding claim 19, (original): Pelissier teaches the method as claimed in claim 17, wherein the order of processing the first number of the check data records is determined by at least one control data record in the transmission list (Figs. 3 and 4 disclose search key as control data, next table key code and classification for the records).

Regarding claim 20, (original): Pelissier teaches the method as claimed in claim 17, wherein a conditional jump to a check data record of the first number of the check data records occurs when a condition for the check data record is satisfied (In Figs. 3 and 4, the next table code is considered a jump address).

Regarding claim 22, (original): Pelissier teaches the method as claimed in claim 17,

wherein, for accessing a check data record from the second number of the check data records (Column 6, lines 25-31 abd also, see Fig. 3 elements 306, 308 and 310 are in a group), an index is accessed in order to ascertain a group, to which the check data record belongs (Column 4, lines 16-20 and also, in Figs 3 and 4, next table key code/next table code are indicating if more search is required or not); and

wherein the index is formed on the basis of the identifiers of the data telegrams (Column 4, lines 16-20, and also, see Figs. 3 and 4).

Regarding claim 23, (new): Pelissier teaches the subscriber as claimed in claim 1, wherein:

the identifier of a corresponding check data record is a globally unique identifier corresponding to only one data telegram (In Figs. 3 and 4 , MAC address which is part of the header is a unique number that correspond to the datagram),

the second number of the check data records is grouped such that the received data telegram is first matched with a corresponding group of the check data record based on least significant bits in the identifier of the received data telegram and only then with a corresponding unique record based on the identifier (In Fig. 3, the least significant bits of the search key is different and the grouping is done accordingly),

each of the check data records is an application frame control word (In Figs. 3 and 4, column Next Table Code for each record), and

the transmission list is sequentially processed by sequentially generating data telegrams for each of the check data records in the transmission list (See Fig. 3, column Search Key).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 6, 7, 11, 14, 15, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelissier (US Patent No. 6,850,513) in view of Lindgren et al. (US Patent Publication No. 2002/0126688).

Regarding claim 3, 11 and 18, (original): Pelissier teaches the subscriber as claimed in claims 1, 9 and 17, but fail to explicitly disclose the device , method and system wherein the transmission list is processed within a cycle. However, Lindgren et al. disclose the device, method and system wherein the transmission list is processed within a cycle (Paragraph [0065]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and device of Pelissier to include transmission within a cycle disclosed by Lindgren et al. in order to increase the data transmission rate and reduce delay.

Regarding claims 6 and 14, (original): Pelissier teaches the subscriber as claimed in claims 5 and 13, but fail to explicitly disclose the system and device further comprising a cycle counter, wherein the control data record is formed such that a jump to the jump address occurs in every nth cycle. However, Lindgren et al. disclose the system and device further comprising a cycle counter, wherein the control data record is formed such that a jump to the jump address occurs in every nth cycle (Paragraph [0065]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and device of Pelissier to include transmission within a cycle that data is to be sent in this particular time slot disclosed by Lindgren et al. in order to increase the data transmission rate and reduce delay.

Regarding claims 7 and 15, (original): Pelissier in view of Lindgren et al. teach the subscriber as claimed in claims 6 and 14, Lindgren et al. further disclose the

system and device wherein the control data record is in a form such that the nth cycle is chosen by masking bit positions of a cycle number (Paragraph [0065]).

Regarding claim 21, (original): Pelissier teach the method as claimed in claim 20, but fail to explicitly disclose the method further comprising checking for satisfaction of the condition based on a cycle counter. However, Lindgren et al. teach the method further comprising checking for satisfaction of the condition based on a cycle counter (Paragraph [0065]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and device of Pelissier to include transmission within a cycle that data is to be sent in this particular time slot in the position that corresponds to the time slot to be used for transmission disclosed by Lindgren et al. in order to increase the data transmission rate and reduce delay.

Response to Arguments

6. Applicant's arguments with regards to claims 1, 9, and 17 filed 05/08/2008 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., On page 11 of Applicant's response, statements "having separate table for transmission and reception", "different record/table for transmission and reception", and "an entry in the classification list include an address to memory location where the data of the packet is stored") are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 11 of the Applicant's response, Applicant argued that Pelissier does not teach "a record that uniquely identifies one corresponding packet". The Examiner respectfully disagrees. As disclosed on column 4, lines 29-57 "search key" utilizes specific/unique classification information, destination and source addresses in order to search and retrieve information from the classification table. Also, MAC address is a unique address.

On page 11 of the Applicant's response, Applicant argued that Pelissier does not teach "record including a unique identifier of the packet and an address for memory location where the data of the packet is stored". The Examiner respectfully disagrees. As disclosed on column 4, lines 29-57 "search key" utilizes specific/unique classification information, destination and source addresses stored on the table/buffer in order to search and retrieve information from the classification table. Also, MAC address is a unique address.

On page 11 of the Applicant's response, Applicant argued that Pelissier does not teach "a classification list where each entry will uniquely identify one corresponding packet". The Examiner respectfully disagrees. As disclosed on Fig. 3, the entries in the table is unique and as shown on column 4, lines 39-40, the specific classification information is in a packet.

On page 12 of the Applicant's response, Applicant argued that the Examiner's position is not understood. To clarify in more detail, on Figs. 3 and 4, Pelissier discloses

search key as control data, next table key code as order of processing/conditional jump and classification for the records.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., On page 12 of Applicant response, statements "the classification table (alleged transmission list) including any information relating to the sequence of transmission" And "skipping records in the same classification table") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In regards to claims 3,6,7,11,14,15,18, and 21, Applicant argued the reference fails to teach the claimed invention based on the reasons as stated in the arguments of claims 1, 9 and 17. Examiner respectfully disagrees with the same reasons as discussed above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/
Examiner, Art Unit 2619

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/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2619